

NISTIR 6774

Workshop On Fire Testing Measurement Needs: Proceedings

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(Editor)



NIST

National Institute of Standards and Technology
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**Workshop On Fire
Testing Measurement Needs:
Proceedings**

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Building and Fire Research Laboratory

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U.S. Department of Commerce
Donald Evans, Secretary

National Institute of Standards and Technology
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NRTLs

Nationally Recognized
Testing Laboratories



NRTLs

NRTLs are third-party organizations recognized by OSHA as having the capability to provide product safety testing and certification services to the manufacturers of a wide range of products for use in the American workplace.

The testing and certifications are based on product safety standards approved by national standards organizations such as the American National Standards Institute (ANSI) or the American Society for Testing and Materials (ASTM).



NRTLs - Examples and Certification Marks

 <p>Underwriters Laboratories</p>	 <p>Entela, Inc.</p>
 <p>Factory Mutual Research Corporation</p>	 <p>Wyle Laboratories</p>



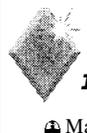
What Does It Mean **for** a Product to Be Certified by an NRTL?

- The NRTL determined that the product met the requirements of an appropriate consensus-based product safety standard either by successfully testing the product itself, or by verifying that a contract laboratory has done so; **and**
- The NRTL has certified that the product met the requirements of the product safety standard



What Does It Mean **for** a Product to Be Certified by an NRTL? (cont'd)

- The manufacturer can indicate that the NRTL has certified the product and that the product has met specified product safety standards by placing the NRTL's certification mark on the manufactured product
- Following the product certification, the NRTL monitors the manufacturer, the product, the marketplace, and the use of the NRTL's certification mark



When Should the CSHO Look **for** NRTL Certification?

- Many product "approval" requirements are found in OSHA's standards (29 CFR Parts 1910, 1915, 1918, and 1926). Approval, **i.e.**, NRTL testing and certification, is required for many types of products, including
 - Electrical equipment
 - Fire detecting and extinguishing equipment
 - Liquefied Petroleum Gas (LPG) utilization equipment
 - Equipment to be used in hazardous locations



Language in OSHA Regulations Requiring "Approval"

OSHA regulations require certain equipment and materials to be

- Accepted
- Approved
- Certified
- Listed
- Meet the requirements of
- Otherwise determined to be safe
- Tested and approved
- Tested and listed



Alternatives to NRTL Certification - Infrequent Exceptions

• In certain limited circumstances, equipment covered by Subparts L and S may be acceptable without NRTL certification



Alternatives to NRTL Certification - Infrequent Exceptions (cont'd)

- Subpart L - Fire Protection: Equipment is also "acceptable" if it is
 - A kind that no NRTL will certify and it is inspected or tested by another Federal agency and found to be in compliance with provisions of the applicable NFPA fire code, or
 - Custom-made equipment or installations (designed, fabricated for, and intended for use by a particular customer) determined to be safe by the manufacturer for its intended use



Alternatives to NRTL Certification - Infrequent Exceptions (cont'd)

- Subpart S - Electrical: Equipment is also "acceptable" if it is
 - A kind that no NRTL will certify and it is inspected or tested by another Federal agency, or a State, municipal, or other local authority responsible for enforcing and assuring compliance with occupational safety provisions of the NEC, or
 - ~~Custom-made~~ equipment (designed, fabricated for, and intended for use by a particular customer) determined to be safe by the manufacturer for its intended use



NRTLs -Remember!

OSHA regulations do require that certain equipment be approved or "certified" by a nationally recognized testing laboratory.

OSHA regulations do not specify the particular product safety standard(s) to which the equipment must conform. Such standards are specified by an NRTL as part of its application for recognition. OSHA then determines that such standards are "appropriate."



What Are Appropriate Product Safety Standards?

Product safety standards accepted by OSHA under the recognition process must be "appropriate". An appropriate standard is

- A "document that specifies the safety requirements" for a specific type of product
- Approved and issued by a US-based standards organization (e.g., ANSI) and providing **an** adequate level of safety



Appropriate Product Safety Standards (cont'd)

- 🔒 Developed under a method providing for input by a broad spectrum of those experienced in the safety field involved
- 🔒 Maintained current with revisions of applicable codes and installation standards



Product Safety Standards Accepted for NRTLs

Standards of the following organizations have been accepted for NRTLs:

- & American National Standards Institute (ANSI)
- & American Society for Testing and Materials (ASTM)
- 🔒 Underwriters Laboratories (UL)
- 🔒 Factory Mutual Research Corporation (FMRC)



Product Safety Standards Accepted for NRTLs (cont'd)

Over 600 individual product safety standards have been approved. Most cover products primarily used in commercial and industrial workplaces. Examples:

- 🔒 ANSI/UL 50 Enclosures for Electrical Equipment
- 🔒 ANSI/NFPA 12 Carbon Dioxide Extinguishing Systems
- 🔒 FMRC 7812 Industrial Trucks – LP-Gas



How Can a CSHO Find Out if a Product Is Certified as Required?

Certified products are

- & “Marked” by the manufacturer with the mark of the **NRTL**
- and*
- 🔒 Listed in a “Listing Book” published by the NRTL



What is OSHA’s “Nationally Recognized Testing Laboratory Recognition Program”?

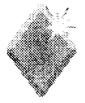
The NRTL Program

- 🔒 Seeks to prevent accidents through assuring the safety of products used by American workers
- 🔒 Recognizes a private sector testing organization’s capabilities to test and certify specific types of products for workplace safety
- 🔒 Is administered by the Directorate of Technical support



NRTL Program History and Background

- 🔒 When first adopted, OSHA regulations gave two examples of approval organizations: Underwriters Laboratories (UL) and Factory Mutual Research Corporation (FMRC)
- 🔒 In 1983, OSHA was ordered by a court to remove the specific references to UL and FMRC in a successful lawsuit brought by a private lab
- 🔒 In 1988, OSHA revised its regulations to remove the references, and established the NRTL Program to recognize other organizations as NRTLs



NRTL Program History and Background (cont'd)

- 🔒 The program is growing - as of December 17, 1998 there are 17 recognized laboratories with more than 35 locations, and pending applications could result in a total of 21 laboratories with over 50 locations
- 🔒 The program is national and international in scope; regulations permit recognition of foreign-based labs (e.g., CSA)
- 🔒 Program regulations are contained in 29 CFR 1910.7



Who May Apply for Recognition as an NRTL?

- 🔒 Any testing organization may apply for NRTL Program recognition
 - 🔒 May be US-based or otherwise
 - 🔒 May be owned by a US or foreign organization, but if foreign, the US Trade Representative must make a determination about equal treatment by the foreign country
 - 🔒 Must meet OSHA's criteria for recognition
- 🔒 An applicant must have the capability to be both a testing laboratory and certifying body



Requirements for Recognition

- An organization must meet 4 basic criteria to be recognized
- 1 The capability (including proper testing equipment and facilities, trained staff, written testing procedures, and calibration and quality control programs) to perform testing for each item to be certified
 - 2 Adequate controls for
 - 🔒 Identifying the items it certifies
 - 🔒 Conducting follow-up inspections of the actual production of items to evaluate conformance with test standards



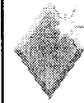
Requirements for Recognition (cont'd)

- 🔒 Conducting field inspections to assure proper use of its marks or labels
- 3 Complete independence from employers (i.e., users), manufacturers, and vendors of the items it tests and certifies (generally interpreted as not owned or controlled by)
- 4 Effective procedures for producing its findings and reports, and for handling complaints and disputes



NRTL Recognition

- 🔒 Good for a period of 5 years
- 🔒 Specific scope for each recognition includes
 - 🔒 Specific product safety standards (e.g., ANSI/UL 1313 - Nonmetallic Safety Cans for Petroleum Products)
 - 🔒 Specific locations (geographical facilities)
 - 🔒 Specific programs (e.g., will do own testing; will accept witnessed testing data; etc.)



NRTL Recognition (cont'd)

- 🔒 Expansion requests may involve any of the 3 areas of scope
- 🔒 Continuation after initial 5-year recognition period requires application for renewal



Implications for State Plan States

- 🔒 State Plans have the option of establishing their own program for recognizing testing laboratories
- 🔒 **Any** such program
 - 🔒 Must accept product certification by OSHA-recognized NRTLs where State safety requirements are the same as the Federal
 - 🔒 Applies only within that State
 - 🔒 Must be at least as effective as the Federal program



Implications for State Plan States (cont'd)

- 🔒 To date, no State has established its own program



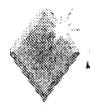
Remember!

- 🔒 OSHA recognizes NRTLs
- 🔒 NRTLs test and certify equipment/materials as conforming to product safety standards
- 🔒 Equipment/materials are certified or listed and labeled
- 🔒 Product safety standards are approved by appropriate US standards organizations



Further Information

- 🔒 For information on the NRTL Program:
Call (202) 693-2110
- or*
- _____ Visit the NRTL Program website:
Select "Programs" at **www.osha.gov**



Selected Website Information

- 🔒 Current List of NRTLs
- 🔒 Current List of Sites Recognized Under the Program
- 🔒 List of Standards Recognized
- 🔒 Types of Products Requiring NRTL Approval
- 🔒 Specific References to **OSHA** Standards Requiring NRTL Approval